

Date: Tuesday, 7/18/2006 3:00:53 PM
 User: Kint Johnson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 02.500 SUPPORT
 Job Number : 27970
 Estimate Number : 11058
 P.O. Number : *N/A*
 This Issue : 7/18/2006 S.O. No. : *N/A*
 Print Rev. : NC
 First Issue : *N/A* Type : PURCHASED PARTS
 Previous Run : 27506
 Written By : *[Signature]*
 Checked & Approved By : *[Signature]* 06.07.19
 Comment : Est. C 02.11.26 Added P/O KJ

Part Number : D28921
 Drawing Number : D2892 REV A
 Project Number : N/A
 Drawing Revision : A
 Material : *N/A*
 Due Date : 8/18/2006 Qty: *7* Um: *8* Each

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PG PURCHASING



Comment: PURCHASING

Issue P/O: *1721*

Description: D6104-003

Material: 17-4 PH SS (AMS 5643 OR AISI 630) as per Dwg D6104

Material release note required.

Blank size makes (2) D2891-1

3.25 + 3.8

2.0 D6104003 17-4 SS Roundbar 3.25"OD



Comment: Qty.: 1.0000 Each(s)/Unit Total: 8.0000 Each(s)

Support

3.0 PACKAGING-1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect for Transit Damage

Ensure Material Release Note is attached

4.0 MORI SEIKI MORI SEIKI CNC LATHE LARGE

PG

Comment: MORI SEIKI LATHE

Turn blank for Haas as per Folio FA082

*Issue P.O. 2008**C. Log 109/12 (8)*

5.0 QC1 INSPECT ALL DIM TO DIM SHEET

RG

Comment: INSPECT ALL DIM TO DIM SHEET

*Receive & Inspect for**transit damage**En 06/10/15**5b Inspect level 5*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: *SD* Date: 06/12/27

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

Date: Tuesday, 7/18/2006 3:00:53 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 02.500 SUPPORT

Job Number: 27970

Part Number: D28921

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

BAND SAW

BAND SAW



Comment: BAND SAW

Machine as per Folio FA082

Tumble & Deburr

Sp/5.6 06/10/22

14

7.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

Sp/5.6 06/10/22

14

8.0

QC8

SECOND CHECK



Comment: SECOND CHECK

J.F. 06/10/23

14

9.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

M101575

yl 06/10/26 x 14

10.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



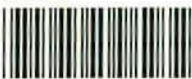
Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

OB 06/10/26 (14)

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

ST 1616

B 06/10/26 (14)

12.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

06/10/27 (14)

Job Completion



U 06/10/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD	Work Order: 27970
Description: Ø2.500 Support	Part Number: D2892-1
Inspection Dwg: D2892 Rev. A	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2892 Rev. A/DSK077 Rev. A and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
Lathe Section									
A	2.524	2.529		2.529	2.529	2.529	2.529		
B	3.702	3.722		3.714	3.712	3.711	3.716		
C	2.814	2.834		2.822	2.823	2.825	2.822		
D	0.718	0.738		0.726	0.732	0.733	0.725		
E	0.090	0.110		0.094	0.095	0.090	0.093		
F	2.714	2.734		2.718	2.719	2.722	2.721		
G	2.029	2.049		2.033	2.032	2.038	2.035		
H	3.214	3.234		3.222	3.220	3.222	3.223		
I	0.913	0.933		0.920	0.920	0.923	0.920		
J	0.022	0.042		0.037	0.032	0.037	0.032		
K	0.090	0.110		0.094	0.102	0.098	0.093		
L									
HAAS Section									
AA	0.115	0.135		0.130	0.130	0.131	0.127		
AB	0.290	0.310		0.300	0.304	0.301	0.306		
AC	0.040	0.060		0.046	0.046	0.050	0.049		
AD	0.115	0.135		0.125	0.129	0.129	0.123		
AE	0.240	0.260		0.244	0.249	0.249	0.245		
AF	0.188	0.193	DT0706	0.189	0.189	0.189	0.189		
AG	0.240	0.260		0.250	0.250	0.250	0.250		
AH	1.126	1.146		1.146	1.143	1.141	1.145		
AI	0.454	0.474		0.465	0.469	0.462	0.468		
AJ	0.240	0.260		0.250	0.250	0.250	0.250		
AK	0.053	0.073		0.063	0.063	0.063	0.063		
AL	0.257	0.262	DT0083	0.260	0.260	0.260	0.260		
AM	1.663	1.683		1.677	1.678	1.673	1.675		
AN	0.053	0.073		0.063	0.063	0.063	0.063		
AO	0.022	0.042		0.032	0.032	0.032	0.032		
AP	2.779	2.789		2.783	2.781	2.784	2.780		
AQ									
AR									
Accept/Reject									

Measured by: EN
Date: 06/10/20

Audited by: J.F.
Date: 06/10/23

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	

DART AEROSPACE LTD	Work Order: 27970
Description: Ø2.500 Support	Part Number: D2892-1
Inspection Dwg: D2892 Rev. A	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2892 Rev. A/DSK077 Rev. A and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
Lathe Section									
A	2.524	2.529		2.529	2.528	2.529	2.529		
B	3.702	3.722		3.711	3.712	3.711	3.715		
C	2.814	2.834		2.823	2.821	2.824	2.823		
D	0.718	0.738		0.726	0.730	0.726	0.730		
E	0.090	0.110		0.093	0.095	0.094	0.091		
F	2.714	2.734		2.723	2.720	2.719	2.712		
G	2.029	2.049		2.035	2.038	2.033	2.024		
H	3.214	3.234		3.223	3.223	3.218	3.220		
I	0.913	0.933		0.922	0.925	0.930	0.921		
J	0.022	0.042		0.032	0.032	0.032	0.032		
K	0.090	0.110		0.099	0.097	0.098	0.098		
L									
HAAS Section									
AA	0.115	0.135		0.128	0.132	0.132	0.131		
AB	0.290	0.310		0.306	0.297	0.298	0.298		
AC	0.040	0.060		0.044	0.043	0.048	0.048		
AD	0.115	0.135		0.120	0.125	0.122	0.121		
AE	0.240	0.260		0.250	0.248	0.246	0.248		
AF	0.188	0.193	DT8706	0.189	0.189	0.189	0.189		
AG	0.240	0.260		0.250	0.250	0.250	0.250		
AH	1.126	1.146		1.145	1.145	1.145	1.147		
AI	0.454	0.474		0.467	0.466	0.468	0.466		
AJ	0.240	0.260		0.250	0.250	0.250	0.250		
AK	0.053	0.073		0.063	0.063	0.063	0.063		
AL	0.257	0.262	DT8683	0.260	0.260	0.260	0.260		
AM	1.663	1.683		1.679	1.675	1.677	1.677		
AN	0.053	0.073		0.063	0.063	0.063	0.063		
AO	0.022	0.042		0.032	0.032	0.032	0.032		
AP	2.779	2.789		2.780	2.780	2.783	2.782		
AQ									
AR									
Accept/Reject									

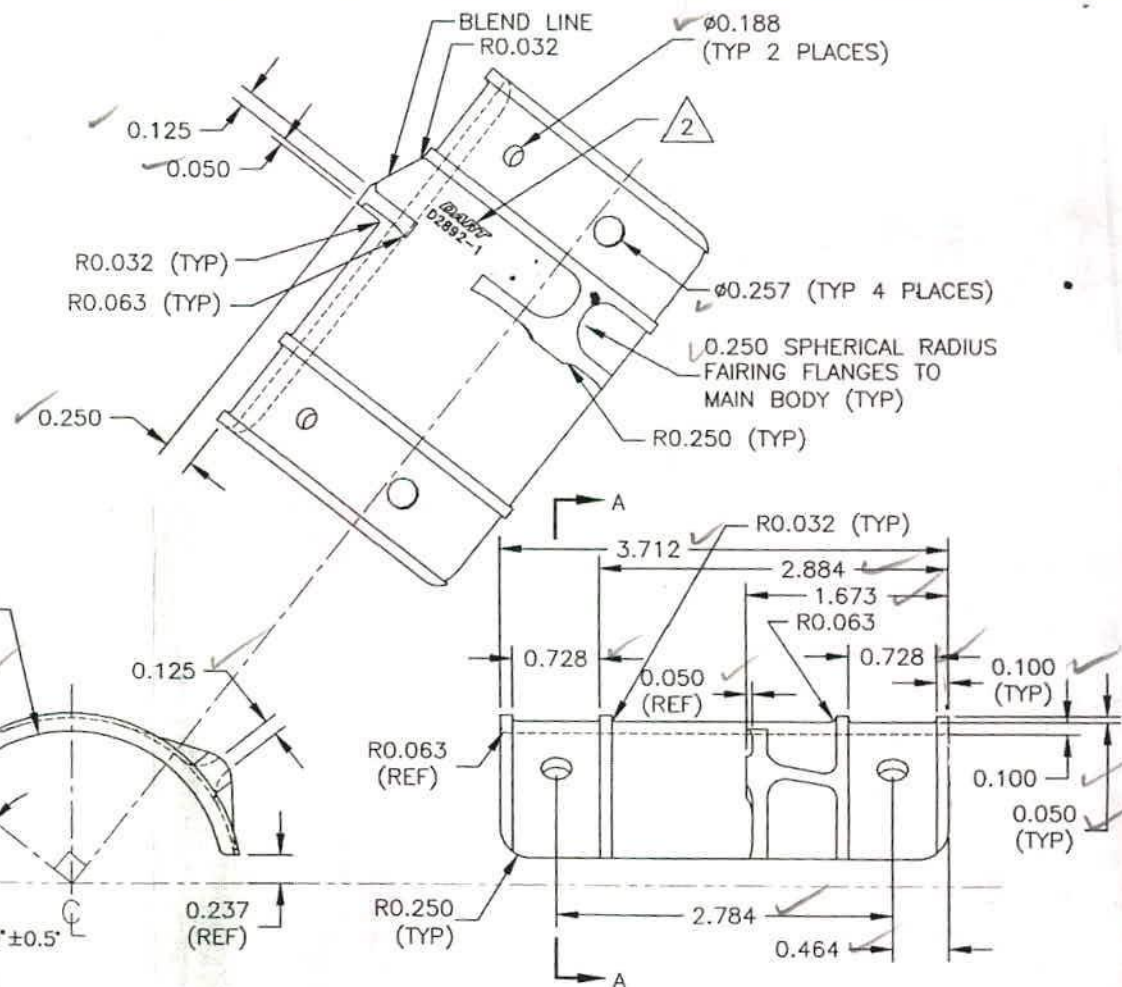
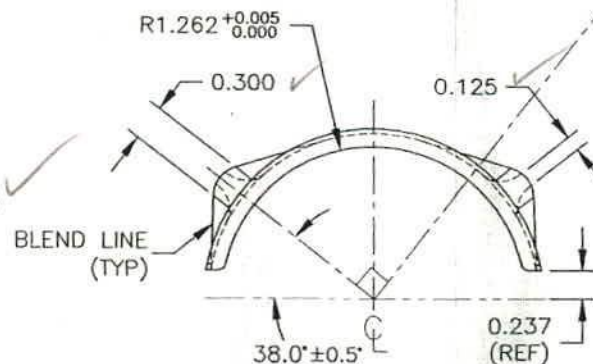
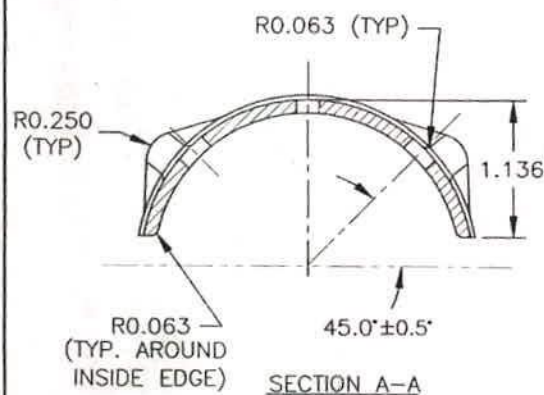
Measured by: E. J. G.
Date: 06/10/22

Audited by: J.F.
Date: 06/10/23

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	J

D2892-1

- 1) MATERIAL: 17-4 PH STAINLESS STEEL
HEAT TREAT TO H900 CONDITION
(900°F FOR 1 HR, AIR COOL)
MIN UTS = 170 KSI (38 HRC)
- 2) IDENTIFY WITH DART LOGO (PER DART SUPPLIED GRAPHIC) AND PART NUMBER IN THIS AREA WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP
- 3) BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) TOLERANCES ARE PER DART QSI 018 (REF. X.XXX = ± 0.010) UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3



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		CHECKED	✓	APPROVED	✓
		DATE	00.11.17	TITLE	Ø2.500 SUPPORT
		DART AEROSPACE LTD. MARKHAM, ONTARIO, CANADA			REV. A SHEET 1 OF 1 SCALE 1:1

NO. 27970
 WORK ORDER
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 UNCONTROLLED COPY
 ENGINEERING
 RETURN TO
 SHOP COPY

COPPER AND BRASS SALES

MATERIAL TYPE STAINLESS STEEL

AISI SERIES
200 300 400
AND
PRECIPIT HARDENING GRADES

"WARNING"

INHALATION OF FUMES, FRESHLY GENERATED BY THE WELDING OF STAINLESS STEEL CONTAINING ONE OR MORE OF THE FOLLOWING INGREDIENTS, ZINC, MAGNESIUM OR COPPER, ARE KNOWN TO CAUSE METAL FUME FEVER. INHALATION OF DUST OR FUME FROM STAINLESS STEEL CONTAINING ONE OR MORE OF THE FOLLOWING INGREDIENTS, ALUMINUM, IRON, MANGANESE, SELENIUM, OR TIN, HAS ALSO BEEN REPORTED TO CAUSE METAL FUME FEVER AND MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT AND/OR AGGRAVATE PRE-EXISTING CONDITIONS. TARGET ORGAN IS PRIMARILY THE LUNG.

THIS PRODUCT CONTAINS CHROMIUM. EXPOSURE TO CHROMIUM DUST OR FUME MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS AND KIDNEY AND LIVER DAMAGE. UNDER HIGH TEMPERATURES, HEXAVALENT CHROMIUM MAY BE PRODUCED. IF IN THE INSOLUBLE FORM, IT IS A CONFIRMED HUMAN CARCINOGEN. THIS PRODUCT MAY ALSO CONTAIN NICKEL AND COBALT. INHALATION OF NICKEL OR COBALT DUST OR FUME MAY RESULT IN INFLAMMATION OF THE RESPIRATORY TRACT. NICKEL AND COBALT HAVE BEEN IDENTIFIED AS POTENTIAL HUMAN CARCINOGENS.

IF COATED WITH OIL, MAY CAUSE SKIN IRRITATION/DERMATITIS BY CONTACT. WELDING FUME IS LISTED AS A POSSIBLE CARCINOGENIC TO HUMANS.

READ THE STAINLESS STEEL MATERIAL SAFETY DATA SHEET (MSDS) ON FILE WITH YOUR EMPLOYER BEFORE WORKING WITH THIS MATERIAL

- * If processing or recycling produces particulate, use exhaust ventilation or other controls designed to prevent exposure to workers. Examples of such activities include melting, welding, grinding, abrasive sawing, sanding and polishing. Any activity which abrades the surface of this material can generate airborne particulate. Use respiratory protection (P100, quantitative fit testing required) if exposures exceed the permissible limits.
- * The Occupational Safety and Health Administration (OSHA) have set mandatory limits on occupational exposures.
- * Stainless Steel, in solid form and as contained in finished products presents no special health risk.
- * Sold for manufacturing purposes only. This product can be recycled; contact your sales representative.

The Occupational Safety and Health Administration require employers to provide training in the proper use of this product.

For additional information, call or write to Copper and Brass Sales, 22355 West Eleven Mile Road, Southfield, MI 48033, telephone 248-233-5600, or visit our web site @ www.copperandbrass.com.

**VALBRUNA****SLATER STAINLESS, INC.**

2400 Taylor Street West, P.O. Box 630

Fort Wayne, Indiana USA 46801

Phone: 260-434-2892 Fax: 260-434-2905

Product Certification Report**Report Number: 4078840**

Certified on May 31, 2005 Page 1 of 1

Order I.D. 0500940 001		Order Date 4/29/05		Commodity Code 408853-0	
Dim 1 3.2500	Dim 2 .0000	Dim 3 .0000	Heat I.D. 239178	Customer I.D. 001155	Customer Purchase Order CE5900
Product Shape Rounds			Product Surface HR & Rough Turned		Customer Grade 630
Length (Inches) 132.000 Min. 156.000 Max.			Bill of Lading # 401376	Weight	

Ship To
COPPER AND BRASS SALES
415 STATE PARKWAY
SCHAUMBURG, IL 60173
Sold To
VALBRUNA CORP.
31 IRON HORSE ROAD
OAKLAND, NJ 07436
Lifts: 0096**AISI 630****CONDITION A****ASTMA 564-02****ASMESA 564 01 ED 2002 ADD****AMS 2303E****AMS 5643Q****CHEMICAL ANALYSIS**

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	N	Cb	Ta	Cb+Ta
.039	.57	.026	.017	.54	15.60	4.60	.18	3.35	.04	.29	.001	.29

HB**353****TENSILE PROPERTIES****CAPABILITY**

HB	TS (PSI)	.2%YS (PSI)	%EL(2")	%RA	AGE(F)
433	206000	178300	14.1	50.9	900

MAGNETIC PARTICLE TEST
FREQ SEV
AVG .00 .00
MACRO ASTM E340/E381**MACRO****OK****OK****PERCENT FERRITE**
% FERRITE
AVG 1.0
COPPER AND BRASS SALES**SOLD TO:****DATE: 7/21 QTY. 72465****CUSTOMER PO: 0000721****SHIPPER NO: 42093****BY: 8**

Free of mercury and low melting alloy contamination.

Maxx stainless.

Chemical testing performed to one or several of the following ASTM methods: E415, E572, E1019, E1085, E1086.

Material melted in Italy, manufactured in the United States.

Material conforms to listed specifications.

Quality system is compliant with ISO 9001:2000. Produced in accordance with EN 10204 3.1B.

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes, including Federal law, Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info. I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

Dennis Hackett



CERTIFICATE OF CONFORMITY

SOLD TO:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ont.
K6A 1K7

SHIPPED TO:

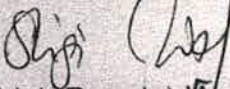
same

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>PART NAME</u>	<u>P.O. NUMBER</u>
10	DSK076	Support as per Dwg DSK076 D6104-003 B28388	2068
8	DSK076	Support as per Dwg DSK076 D6104-003 B28077	2068
10	DSK076	Support as per Dwg DSK076 D6104-003 B26715	2068
20	DSK077	Support as per Dwg DSK077 D6104-003 B28389	2068
8	DSK077	Support as per Dwg DSK077 D6104-003 B27970	2068
7	DSK077	Support as per Dwg DSK077 D6104-003 B28078	2068
14	DSK080	Support as per Dwg DSK080 D6104-011 B27266	2068

MATERIAL: supplied by DART

We hereby certify that the above parts were made in conformance with applicable drawings.

METEC Metal Technology Inc.


Shigi (Regula) Walz

Vankleek Hill, September 20, 2006

